

## EAST Search History

## EAST Search History (Prior Art)

| Ref # | Hits | Search Query   | DBs                                       | Default Operator | Plurals | Time Stamp       |
|-------|------|--|---|------------------|---------|------------------|
| L1    | 1    | sulfofenyl phosphonic acid and ("ZrOCl.sub.2")   | US-PGPUB; USPAT                           | ADJ              | ON      | 2011/04/01 14:00 |
| L2    | 0    | sulfofenyl phosphonic acid with ("ZrOCl.sub.2")  | US-PGPUB; USPAT; EPO; JPO; DERWENT        | ADJ              | ON      | 2011/04/01 14:01 |
| L3    | 0    | zirconium sulfofenyl phosphonic acid   | US-PGPUB; USPAT; EPO; JPO; DERWENT        | ADJ              | ON      | 2011/04/01 14:02 |
| S1    | 3    | ("20030012996"   "5512391"   "5580681"). PN.   | US-PGPUB; USPAT                           | ADJ              | ON      | 2009/09/23 11:15 |
| S2    | 1    | "4721738".pn.  | US-PGPUB; USPAT                           | ADJ              | ON      | 2009/09/23 11:25 |
| S3    | 2    | sulfofenyl\$1phosphate   | US-PGPUB; USPAT                           | ADJ              | ON      | 2009/09/23 11:37 |
| S4    | 6    | ("4388453"   "4730904"   "4835076"   "5174867"   "5211877"   "5243004"). PN. OR ("7423078"). UPPN. | US-PGPUB; USPAT; USOCR                    | ADJ              | ON      | 2009/09/23 11:44 |
| S5    | 0    | zirconium sulfofenyl \$1phosphate  | US-PGPUB; USPAT; USOCR                    | ADJ              | ON      | 2009/09/23 11:45 |
| S6    | 2    | (Zr or zirconium) with sulfofenyl\$1phosphate  | US-PGPUB; USPAT; USOCR                    | ADJ              | ON      | 2009/09/23 11:45 |
| S7    | 2    | (Zr or zirconium) with sulfofenyl\$1phosphate  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ              | ON      | 2009/09/23 11:45 |
| S8    | 202  | hydroxymethyl \$1phosphonate   | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ              | ON      | 2009/09/23 11:47 |
| S9    | 4    | hydroxymethyl \$1phosphonate with (ZR or zirconium)  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ              | ON      | 2009/09/23 11:47 |
| S10   | 113  | zirconium phosphonate  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ              | ON      | 2009/09/23 11:48 |

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| S11 | 18 | zirconium phosphonate and polymer and fuel cell  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | ADJ | ON  | 2009/09/23<br>11:48 |
| S13 | 2  | membrane and Zirconium sulfofenyl phosphate  | US-PGPUB;<br>USPAT                                 | ADJ | ON  | 2010/05/26<br>12:59 |
| S14 | 2  | membrane and Zirconium sulfofenyl phosphate  | US-PGPUB;<br>USPAT; EPO;<br>JPO; DERWENT           | ADJ | ON  | 2010/05/26<br>12:59 |
| S15 | 4  | Zirconium sulfofenyl phosphate   | US-PGPUB;<br>USPAT; EPO;<br>JPO; DERWENT           | ADJ | ON  | 2010/05/26<br>12:59 |
| S16 | 0  | ("2007/0026284").URPN.   | USPAT  | ADJ | ON  | 2010/05/26<br>13:00 |
| S17 | 4  | (zirconium phosph\$5 with sulfofenyl) and polymer and fuel cell                                      | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | ADJ | ON  | 2010/05/26<br>13:53 |
| S18 | 0  | zirconium sulfofenyl phosphonic acid   | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2010/05/26<br>14:06 |
| S19 | 0  | zirconium sulphophenyl phosphonic acid   | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2010/05/26<br>14:06 |
| S20 | 0  | zirconium sulphophenyl phosphate   | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2010/05/26<br>14:06 |
| S21 | 0  | zirconium sulphophenyl phosphonate   | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2010/05/26<br>14:06 |
| S22 | 6  | zirconium sulfofenyl phosphonate   | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2010/05/26<br>14:06 |
| S23 | 15 | membrane and sulfofenyl with solid   | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2010/05/26<br>14:19 |
| S24 | 2  | "20050100772"  | US-PGPUB;<br>USPAT; USOCR                          | ADJ | ON  | 2011/04/01<br>10:38 |
| S28 | 1  | membrane and polymer with proton\$1conduct\$4 and (sulfoalkyl or sulfoaryl) and metal with phosphate | US-PGPUB;<br>USPAT                                 | ADJ | OFF | 2011/04/01<br>11:00 |
| S29 | 7  | membrane and polymer with proton\$1conduct\$4 and (sulfoalkyl or sulfoaryl) and metal with phosphate | US-PGPUB;<br>USPAT; EPO;<br>JPO; DERWENT           | ADJ | ON  | 2011/04/01<br>11:01 |
| S30 | 1  | zirconium phosphonate and (sulfoalkyl or sulfoaryl) and polymer                                      | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | ADJ | ON  | 2011/04/01<br>11:12 |

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| S31 | 133 | membrane and metal with phosphate and (sulfoalkyl or sulfoaryl) and polymer                          | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | ADJ | ON | 2011/04/01<br>11:13 |
| S32 | 5   | membrane and metal with phosphate and (sulfoalkyl or sulfoaryl) and polymer with proton\$1exchang\$4 | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | ADJ | ON | 2011/04/01<br>11:13 |

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